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PATENT COOPERATION TREATY

PCT

NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

CHIRNOMAS, Mordechai
Shiboleth Yisraeli Roberts Zisman
& Co.
Montefiore Street 46
65201 Tel Aviv
ISRAËL

Date of mailing (day/month/year) 18 October 2001 (18.10.01)		IMPORTANT NOTICE	
Applicant's or agent's file reference C-17-60-PCT			
International application No. PCT/IL01/00338	International filing date (day/month/year) 12 April 2001 (12.04.01)	Priority date (day/month/year) 12 April 2000 (12.04.00)	
Applicant C.L.P. INDUSTRIES LTD. et al			

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
KP, KR, US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:
AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EE, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OA, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ.

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 18 October 2001 (18.10.01) under No. WO 01/78862

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer J. Zahra Telephone No. (41-22) 338.83.38
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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

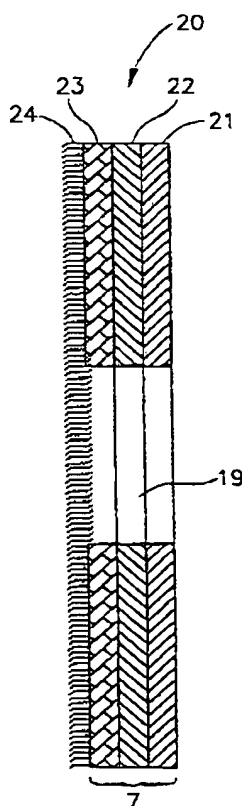
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- (74) Agent: **CHIRNOMAS, Mordechai**; Shibolet Yisraeli Roberts Zisman & Co., Montefiore Street 46, 65201 Tel Aviv (IL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

[Continued on next page]

(54) Title: **DRINK POUCHES AND METHODS OF PRODUCING THEM**

(57) Abstract: There are disclosed methods of making drinking pouches constructed from at least two panels of flexible laminate web material, at least a first panel thereof having a structural layer (21), a barrier layer (22) and a sealant layer (23), the sealant layer having a first thickness. An exemplary method comprises the steps of punching a hole (19) through the first panel, extruding molten sealant onto the sealant layer (24), thereby occluding the hole, colling the first panel and joining the panels together to thereby form a drinking pouch.

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patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *without international search report and to be republished upon receipt of that report*

DRINK POUCHES AND METHODS OF PRODUCING THEM

Field Of The Invention

5 The present invention relates to a method of making beverage containers. More particularly, the present invention relates to a method for producing flexible, puncturable beverage dispensing pouches having a specific area of weakness designed for ease of puncture with a drinking straw.

10 Background Of The Invention

It is well known in the art of beverage containers to make drink pouches constructed from flexible panels cut from sheets of laminate web materials which are welded together on all but one side, filled with a beverage and then the remaining open side is sealed. In order to drink the contents from such pouches, 15 the user must either tear off a corner of the pouch or insert a drinking straw through the web material into the storage compartment of the pouch. Since the laminate web material may be made with layers including PE (polyethylene) for sealing, Al (aluminum) for air and moisture barrier, and Bonyl (bioriented nylon) for strength, it is no easy matter to pierce it with a common plastic drinking straw, 20 especially for children, the largest segment of the consumer population for such products.

One of the greatest problems is that of opening the hole by means of the straw in a simple, neat manner. Especially in the case of containers which were filled and 25

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sealed when the liquid contents were in a hot state, problems arise upon introduction of the straw, since vapour present in the empty head space of the container condenses upon cooling so that there is hardly any air left in the head space. One consequence thereof is that the liquid level may rise and the piercing hole may be below the top of the liquid, resulting in undesirable liquid discharge upon normal opening of the container. Additionally, due to the fact that the front and rear sides of a beverage container are located relatively close to each other, careless piercing may risk piercing the rear side of the beverage container.

- 10 Suggested constructions for beverage containers are taught by DE-OS 4140540A1 and US Patent No. 5868658. These patents teach the construction of a bag in which a piercing hole is provided at the time of manufacture by punching through all the layers of the front panel sheeting. The inside of the front side sheeting has a closure sheeting strip (or patch) welded thereto around or on the
- 15 piercing hole, so that a tight closure is formed. However, the disclosed methods are wasteful and require added welding steps and apparatus to the assembly operation.

- A method of making a beverage packaging bag which uses a laser source to
- 20 facilitate piercing of a straw through the panel is taught in US 4,762,514. The patent teaches providing the panel segment with a pattern of score lines in a portion of the reinforcing outer layer by means of a single application of a laser which is directed at the bag through a mask. The mask shapes the beam to form the desired pattern of score lines.

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US 3,790,744 to Bowen, discloses the use of laser energy to provide a straight weakened line in the laminate web materials as to form a tear line across a length of the laminate. However, the depth of the weakened area is intended to be uniform in order to form a straight tear line, not focussed to facilitate puncturing with a straw.

Summary Of The Invention

- 10 In order to overcome the problem of having users struggle with the pouch during opening it, the present invention teaches methods of providing a beverage container with a puncture point on the surface of the laminate web material, which enables even a child to easily insert a straw.
- 15 According to one exemplary embodiment of the present invention, a sheet of laminate web material having an outer sealant layer, for example of polyethylene, usually dispensed from a roll onto a conveyor belt, is conveyed to a hole-punching station and there is provided with a piercing hole. The hole-punched web material, proceeds downstream from the hole-punching station and there has extruded
- 20 thereon a layer of molten sealant. The molten layer, which may or may not be from the same material as the sealant layer of the flexible web material, is applied in a coating of substantially uniform thickness along the entire outer surface of the sealant layer. The molten sealant which is layered-on thereby occludes the holes. Thereafter the web is cooled and formed into a pouch, according to known
- 25 methods.

The method according to this exemplary embodiment allows for a continuous producing of beverage containers. The continuous production flow is not interrupted especially by the application of a closure sheeting, since the closure of said holes is accomplished by extrusion coating while the web is being conveyed in the conveying direction. A further advantage is in saving completely the working step of welding the closure-web so that the only welding needed is to create the pouch at the end. Furthermore, there is no waste of material since the final thickness of the web material is the same as when using unpunched web material. For example, a prior art pouch made from flexible web material that has a sealant layer in the laminate which has a thickness of about 90 microns, to which is added a 40 micron thick heat-sealed patch.

In contrast, a pouch made according to the present invention start with a flexible web material in which the sealant is provided at half the final thickness, i.e. 45 microns. The material is then punched and the entire sealant side is then supplemented with a further 45 microns worth of molten sealant which is applied by extrusion coating. The final product has a sealant layer of about 80-90 microns in thickness, except possibly for the area of the occluded punched hole. Even if the punched hole is completely filled with the molten sealant, which factor can be easily controlled by one skilled in art by varying such conditions as extrusion rates and cooling rates, it still would provide an area of weakness in the wall of the bag which can be pierced by a child with a pointy straw.

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Another exemplary embodiment of this invention, which allows for a continuous production of beverage containers is by covering the punched holes by extrusion lamination of two layers of polyethylene, one is a molten adherence layer and the other a solid outer layer. The adherence layer is heated up to a high temperature, which in the material turns into liquid and is then spread uniformly on to the sheet, thereby occluding the entire surface of the front side web. The solid outer layer is placed onto the adherence layer during the production process, using the adherence layer as an adhesive in order to stick the web together. The width of both of the layers together is preferably about 60 microns, thus the width of the entire sealant layer ends up having a thickness similar to that of the finished flexible web material known in the prior art.

A further advantage is in saving completely the working step of welding the closure sheeting strip or patch, therefore the only welding needed is to create the pouch at the end of the process. Furthermore, there is no waste of sealant material since the final thickness of the web material is just the same as the thickness of a web without a hole, produced according to known methods.

A third exemplary embodiment teaches a somewhat different approach for making such pouches which is at once, more economical, more rapid, less expensive and results in pouches which are more reliable and substantially easier for children (and adults) to open. According to this embodiment, instead of punching a hole through the flexible web material and then finishing it with a layer of molten sealant material, the flexible web material starts at the normal finished thickness and a specific area thereof is weakened by using laser to score a mark, comprising at

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least two intersecting lines on the opposite side of the flexible web material. The point at which the intersection occurs is affected by being passed over with the laser beam more than once to provide a weak spot at the center of the mark. This method provides a point of weakness in the wall of the bag, which can be pierced
5 by a child or adult with a pointy straw.

The present embodiment does not merely use a mask and a single pass of the laser to make a pattern of a number of score marks, all of the same depth on one side of the front side web. Rather, by using multiple passes of a laser to score a
10 mark having an intersection point on the outer structural side of the flexible web material, the laser affects and weakens the sealant material on the side opposite the scoring. The effect on the sealant layer is strongest where the laser lines intersect and provides a focal weakness in the flexible web material. The present embodiment may be practiced by positioning more than one laser on the
15 production line, positioned or programmed to move in order to provide intersecting score lines.

The method according to this embodiment similarly allows for an uninterrupted production flow of beverage containers. The continuous production flow is
20 particularly not interrupted by the application of a closure sheeting, since this production step is eliminated.

A further advantage is in saving completely the working step of welding the closure, so that the only welding needed, is to create the pouch at the end of the
25 process. Furthermore, there is no waste of sealant material, since, as said, the

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procedure does not involve any use of material, and obviously the final thickness of the web material is just as thick as normally needed.

A Brief Description of the Drawings

5

FIG. 1 shows a schematic representation of a side view of apparatus useful for practising the present invention;

FIG. 2 shows a perspective view of a portion of an embodiment of the apparatus
10 according to the invention;

FIG. 3 shows a perspective view of a beverage bag to be produced;

FIG. 4 shows a section along the line IV- IV in FIG. 3;
15

FIG. 5 shows another embodiment of the invention (extrusion lamination);

FIG. 6 shows a perspective view of a beverage bag to be produced; according to the laser embodiment;
20

FIG. 7 shows a section taken along line 2-2 in FIG. 5 and looking in the direction of the arrows; and

FIG. 8 shows a schematic representation of the process according to the laser
25 embodiment.

Detailed Description Of The Exemplary Embodiments

FIG. 1 shows in a schematic representations an apparatus for producing a beverage container in accordance with the present invention as further illustrated in FIGS. 3 and 4. The sheets of flexible web material necessary for making the front side sheeting web 7, rear side sheeting web 8 and bottom sheeting web 15 of a beverage container 50 are wound onto a front side sheeting supply roll 1 of flexible web material, a bottom sheeting supply roll 4 of flexible web material and a rear side sheeting supply roll 2 of flexible web material. With the aid of conveying rollers 3, the individual sheeting webs dispensed from rolls 1, 2 and 4 are each pulled from their respective supply rolls in a conveying direction. The hole punching station 5 punches at least one piercing hole 19, or a plurality of piercing holes as shown in another exemplary embodiment, in the front side sheeting web 7.

Further downstream of the hole punching station 5, an extrusion station 6 extrudes a molten layer 24 of sealant onto the sealant layer side of the flexible web material. The molten layer 24 is applied in a continuous coating of substantially uniform thickness along the entire surface of the sealant layer 23 with which the front side sheeting web 7 of flexible web material was already coated. The molten layer 24 of sealant which is layered on thereby occludes the hole 19. Thereafter the coated front side sheeting web 16 is cooled and front side sheeting web 7, rear side sheeting web 8 and bottom sheeting web 15 are fed together and passed through a folding and sealing unit 9, which forms and welds them into a pouch 50 which can be filled and then completely sealed, all according to known methods.

According to an alternative embodiment of the present invention, it is also possible, as shown in FIG. 2, to provide a plurality of individual beverage containers to be produced, arranged beside each other and perpendicularly to the conveying direction on the front side **11** and rear side **12** sheeting webs respectively.

As can be seen from FIG. 2 the front side sheeting web **11** is fed to the punching unit **10** for making the piercing holes **13** correspondingly in intermittent manner.

According to the number of containers to be produced a suitable number of holes **13** are made and an identical number of closure sheeting webs **12** are fed from the supply rolls **14** in conveying direction, and run parallel to the front side sheeting web. Then a molten layer is applied in a coating of substantially uniform thickness along the entire surface of the sealant layer with which the front side web **11** is already coated. The coated web **11** is then cut into separate sheeting webs **16** and fed together with back side sheeting webs **18** are folded and welded into a pouch according to known methods

FIG. 4 shows a schematic representation of the front web which includes a web material **20** comprising a structural layer **21**, for example from BONYl, an air/moisture barrier layer **22** and a sealant layer **23** is provided at half of the normal final thickness of about 90 microns, i.e. 45 microns, then punched, and the entire sealant layer **23** is then supplemented with a further 45 microns thickness worth of molten sealant **24** which is applied by extrusion coating.

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FIG. 5 shows a schematic representation of the front side web sheeting of an exemplary embodiment utilizing extrusion lamination. One exemplary embodiment of this method begins with a starting web material which comprises a laminate of structural layer 21 and air/moisture barrier layer 22, in which punch hole 23 was previously provided and onto which are applied a molten adherence layer 25 and an outer layer 26. The adherence layer 25 comprises sealant material which is liquefied and spread or extruded uniformly on to the entire surface of the air/moisture barrier layer 22, and thereby occluding the punch hole 23 with a layer of sealant. The outer layer 26, possibly made from polyethylene or some other sealant-type material, is placed onto the adherence layer 25 during the process, using the adherence layer 25 as an adhesive in order to stick the lamina of the web together. It is also contemplated that some adhesive, other than molten sealant, could be used for the adherence layer 25, i.e. the outer layer 26 and adherence layer 25 need not be from the same material.

15

The width of both of the layers 25, 26 together is about 60 micron, thus the width of the entire front layer stays the same as in other finished embodiments.

In another exemplary embodiment of the present invention, the flexible web material is provided with a weakened point, by use of laser technology as follows. The web 30, intended to be the front side of the bag, passes under a movable laser source 34. The laser beam 35, may be applied using as much as 3 to 4 times the energy used in normal scoring treatment. The laser beam 35 is applied in a pattern of at least two intersecting lines, and is shown in the exemplary embodiment forming a cross-shaped scoring pattern 36 on the structural layer 21

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of the front side web sheet **30** of the pouch **40**. By adjusting the height of the beam-source, the scored intersection point **37** may be up to 3 to 4 times wider than a score line produced by normal treatment, and thereby more visible and easy to hit with a straw.

5

The process which is described not only weakens the material by doubly scoring, at least, the area of the structural layer **21** where the beam paths intersect, but moreover, the heat transmitted through structural layer **21** and air/moisture barrier layer **22** to the sealant layer **23** is believed to be sufficient to cause thermally driven local changes in the sealant. These changes may also make it easier for a child to puncture the resulting pouch at that point using a pointy straw.

10

By manipulating the beam energy and width, one of skill in the art can achieve an intersecting pattern of score lines which are not so deep as to materially affect the structural integrity of the structural layer **21**, and yet which apply enough heat energy, especially at the score line intersection point, which is transmitted through to the sealant layer **23** and weakens it sufficiently to permit easier penetration with a drinking straw.

15

Considering the fact that the laser score is nearly invisible, it is preferable that before scoring with the laser, in order to enable a child to know where to apply the straw end, a dot **31**, or other suitable indicia, is made on the outer side of the front side of the bag, and then the laser is applied with the laser beam intersection mark near the the center of the marked spot.

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FIG. 7 shows a schematic representation of the front side web sheet, in which the punching spot as indicated by dot 31 is weakened by scoring by laser a mark 32 on one side of the front side web, thereby affecting the sealant layer on the other side of the web 33 and weakening what will be the pouch wall at the center of the dot 31.

It should be understood that the above described embodiments of the present invention are merely exemplary and are intended to illustrate the invention without necessarily limiting the scope thereof. It is understood that one of skill in the art may make many modifications and variations to the exemplary embodiments described hereinabove and yet still be within the scope and spirit of the invention as defined in the appended claims.

I claim

1. A method of making a beverage container constructed from at least two
5 panels of flexible laminate web material, at least a first panel thereof having a structural layer, a barrier layer and a sealant layer, said sealant layer having a first thickness, comprising the steps of punching a hole through said first panel, extruding molten sealant onto said sealant layer, thereby occluding said hole, cooling said first panel and joining said panels to thereby form a drinking pouch.
- 10 2. A method of making a beverage container as described in claim 1, wherein said sealant layer is polyethylene in a first desired thickness and said extruded molten sealant is extruded molten polyethylene.
- 15 3. A method of making a beverage container according to claim 1, including the steps of conveying a bottom sheeting web in the conveying direction between the front and rear side sheeting webs, and welding the bottom sheeting web in part to the front and rear side sheeting webs.
- 20 4. A method of making a beverage container according to claim 2, including the steps of conveying a bottom sheeting web in the conveying direction between the front and rear side sheeting webs, and welding the bottom sheeting web in part to the front and rear side sheeting webs.

5. A method of producing a beverage container made out of flexible laminate web material, comprising using a directed energy source to provide a puncture point on a surface of said web material at the intersection of at least two beam paths across said web material.

5

6. A method of producing a beverage container in accordance with claim 5, wherein said puncture point is formed by the intersection of at least three laser score paths.

10 7. A method of producing a beverage container in accordance with claim 6, wherein said intersection of laser score paths is provided against a highlighted background area on said web material.

8. A method of making a beverage container as described in claim 5, using a
15 beam containing 3-4 times the energy used in normal scoring treatment.

9. A method of making a beverage container as described in claim 5, further comprising adjusting the energy and the speed of the laser beam to achieve the effect of a beam in the range of 2.5 joules to 3.5 joules.

20

10. A method of making a beverage container as described in claim 5, further comprising adjusting the laser beam energy by changing the distance between surface and said directed energy source.

25

11. A method of making a beverage container in accordance with claim 7, wherein said highlighted area is a dot.

12. A drinking bag container made out of flexible laminate web material having a focal weakness comprising intersecting laser score paths, provided for insertion of a drinking straw.

13. A drinking bag container made out of flexible web material according to claim 12, wherein said intersection of laser score paths is provided in a highlighted area on said web material.

14. A drinking bag container made out of flexible web material according to claim 12, having the width of the laser score paths 3-4 times wider than normal, thereby providing a larger focal weakness.

15. A drinking bag container made out of flexible web material according to claim 12, comprising a dot on the outer side of the front side of the bag, in order to enable a child to know where is the exact place which should be pierced by the straw.

16. A method of making a beverage container comprising covering said holes by extrusion lamination of two layers, an adherence layer and an outer layer. The adherence layer is spread uniformly on to the sheet, thereby occluding the entire surface of the front side web including said holes. The other layer is placed onto

the adherence layer during the production process, using the adherence layer as an adhesive in order to stick the web together.

17. A method of making a beverage container as described in claim 16, in which
5 the final thickness of the web material is just the same as the thickness of a web without a hole, produced according to known methods.

18. A drinking bag container made from at least two panels of flexible laminate
web material, at least one of said two panels of flexible laminate web material
10 having a structural layer, and a barrier layer, said structural layer and said barrier layer having a hole passing therethrough and further having an extruded sealant layer applied onto said barrier layer and occluding said hole passing through said barrier layer and said structural layer.

15 19. A drinking bag container in accordance with claim 18, further comprising a sealant layer applied onto said extruded sealant layer.

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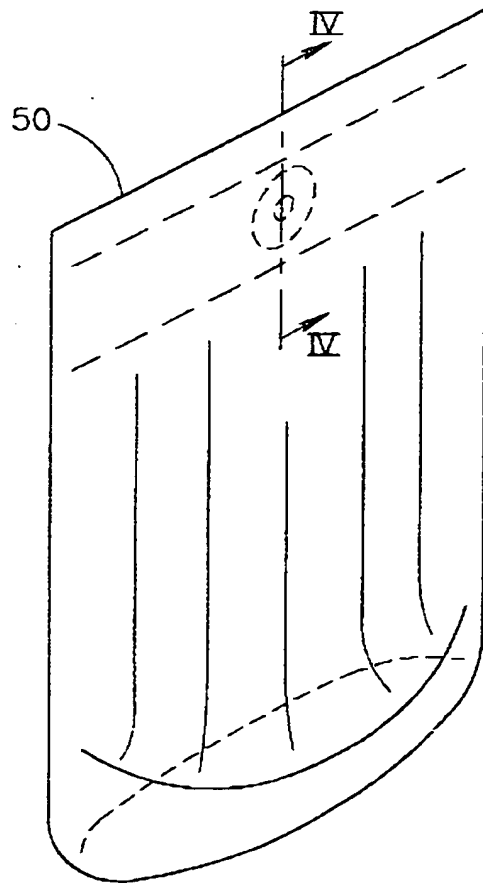


FIG. 3

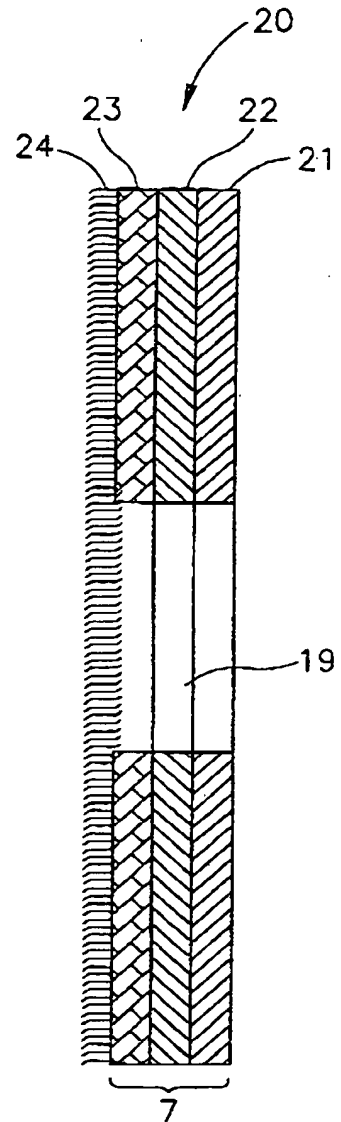


FIG. 4

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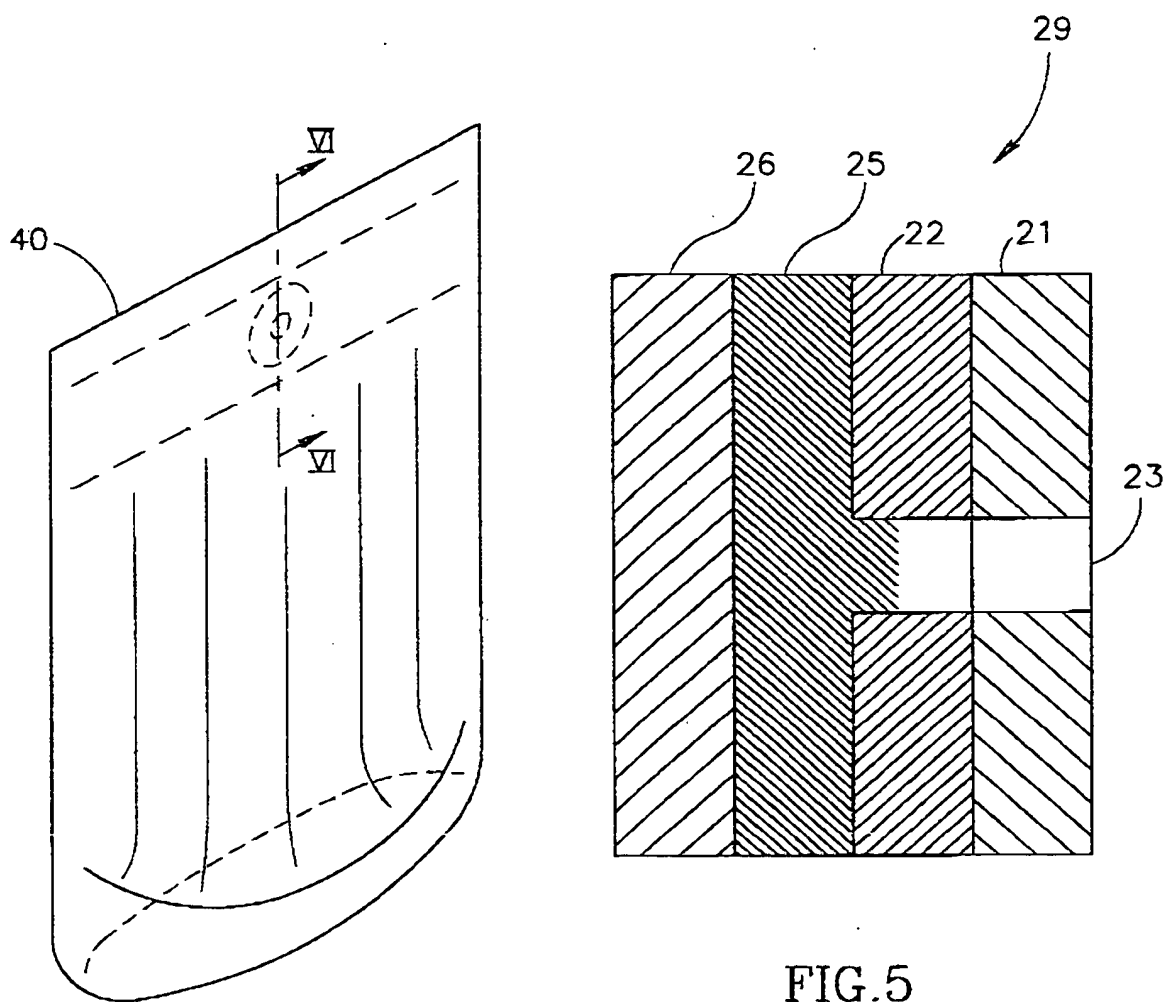


FIG.6

FIG.5

4/4

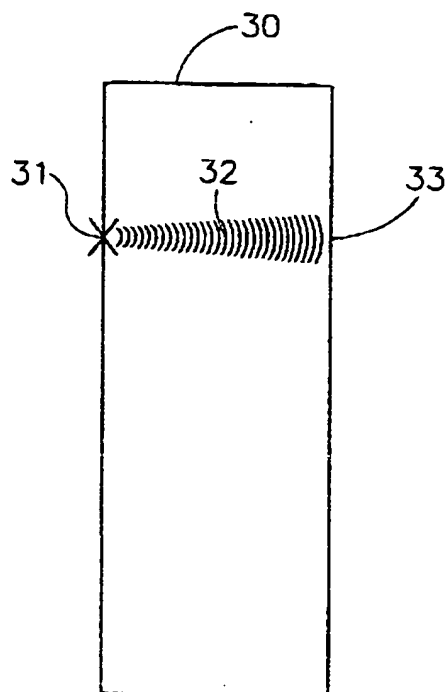


FIG. 7

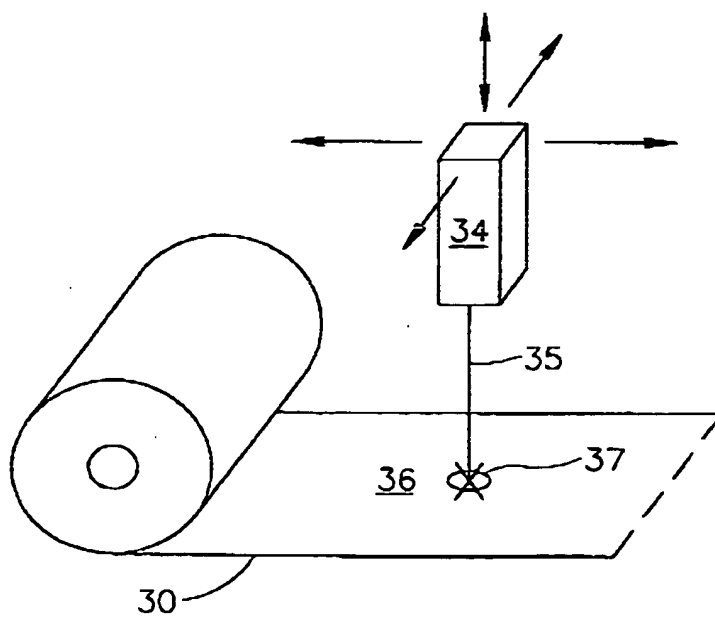


FIG. 8

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

PCTNOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL SEARCH REPORT
OR THE DECLARATION

(PCT Rule 44.1)

To:

SHIBOLETH YISRAELI ROBERTS
ZISMAN & CO
Attn. Chirnomas, Mordechai
Montefiore Street 46
65201 Tel Aviv
ISRAEL

Date of mailing
(day/month/year)

14/11/2001

Applicant's or agent's file reference

C-17-60-PCT

FOR FURTHER ACTION

See paragraphs 1 and 4 below

International application No.

PCT/IL 01/00338

International filing date
(day/month/year)

12/04/2001

Applicant

C.L.P. INDUSTRIES LTD. et al.

1. ☒ The applicant is hereby notified that the International Search Report has been established and is transmitted herewith.

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the International Application (see Rule 46):

When? The time limit for filing such amendments is normally 2 months from the date of transmittal of the International Search Report; however, for more details, see the notes on the accompanying sheet.

Where? Directly to the International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland
Facsimile No.: (41-22) 740.14.35

For more detailed instructions, see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no International Search Report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.

3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Further action(s):** The applicant is reminded of the following:

Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the International application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).

Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the International Searching Authority



European Patent Office, P.B. 5818 Patentlaan 2
NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
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Authorized officer

Irene Sardjoe

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the PCT Applicant's Guide, a publication of WIPO.

In these Notes, "Article", "Rule", and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only.

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When?

Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been filed, see below.

How?

Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?**Letter (Section 205(b)):**

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

- (i) the claim is unchanged;
- (ii) the claim is cancelled;
- (iii) the claim is new;
- (iv) the claim replaces one or more claims as filed;
- (v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the same time of filing the amendments with the International Bureau, also file a copy of such amendments with the International Preliminary Examining Authority (see Rule 62.2(a), first sentence).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, where upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see Volume II of the PCT Applicant's Guide.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference C-17-60-PCT	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, Item 5 below.	
International application No. PCT/IL 01/00338	International filing date (day/month/year) 12/04/2001	(Earliest) Priority Date (day/month/year) 12/04/2000
Applicant C.L.P. INDUSTRIES LTD. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international Search Report consists of a total of 03 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the **title**,

the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

4

None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL 01/00338

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

There are disclosed methods of making drinking pouches constructed from at least two panels of flexible laminate web material, at least a first panel thereof having a structural layer(21), a barrier layer(22) and a sealant layer(23), the sealant layer having a first thickness. An exemplary method comprises the steps of punching a hole(19) through the first panel, extruding molten sealant onto the sealant layer(24), thereby occluding the hole, colling the first panel and joining the panels together to thereby form a drinking pouch.

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 October 2001 (18.10.2001)

PCT

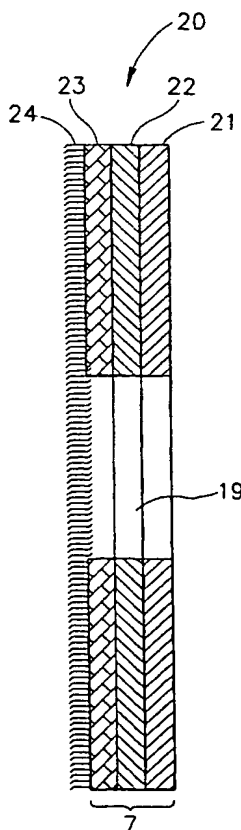
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WO 01/76862 A3

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- (71) Applicant (for all designated States except US): **C.L.P. INDUSTRIES LTD.** [IL/IL]: M.P. Sde Gat, 79408 Kibbutz Negba (IL).
- (72) Inventor; and
(75) Inventor/Applicant (for US only): **STERN, Rani** [IL/IL]: M.P. Lachish Darom, 49351 Kibbutz Sde Yoav (IL).
- (74) Agent: **CHIRNOMAS, Mordechai**; Shibolet Yisraeli Roberts Zisman & Co., Montefiore Street 46, 65201 Tel Aviv (IL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

[Continued on next page]

(54) Title: **DRINK POUCHES AND METHODS OF PRODUCING THEM**

(57) Abstract: There are disclosed methods of making drinking pouches constructed from at least two panels of flexible laminate web material, at least a first panel thereof having a structural layer (21), a barrier layer (22) and a sealant layer (23), the sealant layer having a first thickness. An exemplary method comprises the steps of punching a hole (19) through the first panel, extruding molten sealant onto the sealant layer (24), thereby occluding the hole, colling the first panel and joining the panels together to thereby form a drinking pouch.



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patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.